

Application No. 10/723,914
Amendment Dated December 7, 2004
Reply to Office Action of September 8, 2004

REMARKS/ARGUMENTS

Claims 1-16, 19, 20, 23 and 24 are pending, with Claims 1, 15, 19 and 23 independent. By this Amendment, Claims 1, 3 and 15 are amended and Claims 17, 18, 21 and 22 are cancelled. No new subject matter is added by this Amendment. Reconsideration in view of the foregoing amendments and the following remarks is respectfully requested.

Except as indicated in the remarks set forth below, the amendments to the claims are made for the purpose of addressing informalities and improving the clarity of the claims, and are not required to overcome any prior art cited by the Office Action.

ALLOWABLE SUBJECT MATTER

Applicant acknowledges the Examiner's indication that Claims 19, 20, 23 and 24 are allowed and that Claims 3-5 contain allowable subject matter. Claim 1 is amended to include features of objected Claim 3 and allowed Claim 23, and is believed to place Claim 1 in condition for allowance. Applicant respectfully submits that all of the pending claims are allowable for at least the reasons set forth below.

35 U.S.C. §102 REJECTIONS

Claim 1 stands rejected under 35 U.S.C. §102(b) over Humphrey (U.S. Patent No. 4,805,571), Cowans (U.S. Patent Application No. 2002/0104492 A1), Winz (U.S. Patent No. 5,526,877) and Kolle et al. (U.S. Patent No. 5,000,516). These rejections are respectfully traversed for at least the reasons set forth below.

The Examiner asserts that each of the above-applied references discloses the limitations of Claim 1. However, Applicant respectfully submits that the references do not disclose an

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extractor for releasing a compound from a dome end of a munition having a casing having an open end opposite the dome end, a liner inside the casing with a flange of the liner mechanically coupled to the casing and directed toward the open end, and the compound enclosed in the casing between the dome end and the liner, as amended into and now reciting in independent Claim 1. Moreover, Applicant respectfully submits that the references do not disclose a fluid port adapted to introduce a fluid through the dome end to shear the mechanical coupling between the liner and the casing, as recited in Claim 1. Applicant believes that these features have also been indicated as allowable subject matter in Claims 3 and 23, respectively.

Humphrey discloses an internal combustion engine that addresses the injection of water directly into a cylinder in conjunction with a combustible mixture of fuel and water as a means of improving performance. Force is generated by the expansion of gases resulting from combustion of the contained fuel mixture. Cowans discloses an internal combustion engine with variable compression ratio. Winz discloses a method of cleaning oil well strings via utilization of a series of high-pressure nozzles that depend upon rapid flow of fluid to create a scrubbing action on the surfaces to be cleaned. Kolle discloses an apparatus for rapidly generating high-pressure pulses for use in the rock crushing industry. However, these references do not disclose:

a) an extractor for releasing a compound from a dome end of a munition having a casing and a liner; or b) a fluid port adapted to introduce a fluid through the dome end to shear the mechanical coupling between the liner and the casing, as recited in Claim 1. Accordingly, the references do not anticipate Claim 1. Withdrawal of the rejection of Claim 1 under 35 U.S.C. §102(b) is respectfully requested.

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35 U.S.C. §103 REJECTION

Claims 1 and 15 stand rejected under 35 U.S.C. §103(a) over Knight (U.S. Patent No. 1,492,925) in view of Scherer et al. (U.S. Patent No. 5,789,695). This rejection is respectfully traversed for at least the reasons set forth below.

The Examiner admits that Knight does not disclose an open end opposite a dome end of a casing and substitutes the casing taught in Scherer for the casing disclosed in Knight. However, Applicant respectfully submits that the combination does not render obvious the features recited in amended Claims 1 and 15.

Regarding Claim 1, the combination would not have resulted in a fluid port adapted to sheer the mechanical coupling between the liner and the casing. Knight teaches an apparatus for unloading high explosive shells by steaming out or washing out the explosive from loaded projectiles. In operation, steam jets through a nozzle 4 into a booster cavity in the explosive charge. Some of this steam is condensed and the hot water thus formed flows down into the cups 5. Some of the material of the charge is liquefied and also flows down from the shells into the cups 5. However, there is no teaching that this flushing process could sheer a mechanical coupling between a liner and casing of a munition. In fact, Knight does not teach a liner in its shells. Even if the casing taught in Scherer were combined with the teachings of Knight, the apparatus in Knight would flush out the explosive 170 from the bomblet 16 of Scherer, but the combined teachings would not result in a fluid port adapted to sheer the mechanical coupling between the funnel 166 and the bomblet housing 160. In fact, Scherer teaches that a hub 72 is used to mill out a bead location 168 so that the funnel 166 can be removed. That is, Scherer

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teaches that the mechanical coupling must be milled out by a hub 72 so that the funnel 166 can be removed. Therefore, neither Knight nor Scherer teach or suggest a fluid port adapted to sheer a mechanical coupling between a liner and a casing. Accordingly, the combination of Knight and Scherer would not have resulted in the invention recited in Claim 1.

Regarding Claim 15, the combination of Knight and Scherer would not have resulted in a fluid port sealingly abutting the dome end of the casing and adapted to introduce a fluid through the dome end to the compound to release the compound by separating the compound from the dome end. The fluid port taught in Knight is not sealingly abutting the dome end of the shell. Moreover, Scherer does not disclose or teach a fluid port as claimed. Therefore neither reference teaches the claimed subject matter.

In addition, Knight could not be modified with another teaching to result in the claimed subject matter. In order for the apparatus taught in Knight to work, the nozzle 4 must not seal the dome end of the shell. That is, the steaming and flushing process requires that the material of the charge flows down and out of the shells. This could not happen if the dome end of the shells were sealed by the nozzle 4. Therefore the apparatus taught in Knight would not work if it were modified to result in the invention recited in Claim 15.

In summary, the combination of Knight and Scherer does not teach and would not have resulted in the features recited in Claims 1 and 15. Withdrawal of the rejection under 35 U.S.C. §103 is respectfully requested.

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REJOINDER OF CLAIMS

As noted above, Applicant respectfully submits that Claim 1 is allowable over the prior art. Applicant respectfully requests the rejoinder and allowance of non-elected Claims 2, 6-14, and 16 upon the allowance of Claim 1, as the claims depend from Claim 1.

CONCLUSION

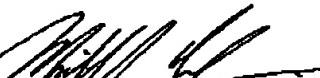
For at least the reasons set forth above, it is respectfully submitted that the above-identified application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are respectfully requested.

Should the Examiner believe that anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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entry and/or ensure consideration of
this submission.